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"Whither Modula-2?" Dec 89, 27-33.

## Product Wrap-ups

### 386 DOS multitaskers

"Multitasking operating system enhancements for the 386," T. Parker, Nov 89, 113-126: Concurrent DOS 386 3.0 (Digital Research Inc.); Desqview 386 2.25 (Quarterdeck Office Systems); 386/Multiware 1.0 (Alloy Computer Products); Vmos/3 G3 (StarPath Systems Inc.); Omniview 4.13 (Sunny Hill Software); PC-MOS 3.0 (The Software Link); VM/386 1.22 (Intelligent Graphics Corp.); Windows/386 v. 2.11 (Microsoft Corp.).

### Animation tools

"Animation software," J. Powell, Sep 89, 107-111: PCX Programmer's Toolkit 3.51, PCX Effects 1.0 (Genus Microprogramming); Graphics and Animation Library (Software Artistry); *High Performance Graphics in C—Animation and Simulation*, by Lee Adams (TAB Books).

### APL

"The dialects of a programming language," G. Taylor, Dec 89, 93-98: APL2/PC 1.01 (IBM); APL★PLUS/PC 9.0, APL★PLUS II 2.0 (STSC Inc.); APL/PC 17.0 and Tangible Math (I.P. Sharp Associates Inc.); I-APL 1.1 (I-APL Ltd.).

### Assemblers

"Assemblers for PCs," J.M. Dlugosz, Apr 89, 99-104: 386|ASM 2.0 (Phar Lap Software Inc.); MASM 5.1 (Microsoft Corp.); OPTASM 1.5 (SLR Systems Inc.); TASM 1.0 (Borland International).

### BASIC libraries

"BASICally extendable," J. Angus, Dec 89, 85-91: DB/LIB v. 2.0 (AJS Publishing Inc.); QuickWindows Advanced v. 1.55 (Software Interphase Inc.); Pro-Bas v. 3.0 (Hammerly Computer Services); Exim Toolkit v. 4.5.2 (Exim Services of North America); PDQ v. 1.2 (Crescent Software Inc.); QB Optimizer (Microhelp).

### C

"The C Majors," S. Lewis, K. Hino, A. Holub, S.R. Ladd, G.M. Vose, and R. Ward, Feb 89, 30-75: Aztec C v. 4.1 C (Manx Software Systems Inc.); C86PLUS v. 1.20 D (Computer Innovations Inc.); DeSmet DC88 v. 3.1 (C-Ware Corp.); Eco-C88 v. 4.15 (Ecosoft Inc.); High C v. 1.4 (MetaWare Inc.); Lattice C v. 3.3 (Lattice Inc.); Microsoft C v. 5.1 with Quick C (Microsoft Corp.); Power C v. 1.2 (MIX Software); Turbo C Professional v. 2.0 (Borland International); WATCOM C v. 6.5 (WATCOM Products Inc.); Zortech C v. 1.06 (Zortech Inc.).

"Three Cs for the Macintosh," B. Gordon, Feb 89, 117-129: Aztec C v. 3.6 (Manx Software Systems Inc.); MPW C (Apple Programmer's and Developer's Assoc.); Think C v. 3.0 (Symantec Corp.).

### CASE

"A baker's dozen CASE tools for PCs and workstations," T. Parker, Jan 89, 91-117: Advantage (Helix Corp.); Auto-Mate Plus (LBMS); Brackets, Design Machine, Design Vision (Optima); Design (Meta Software Corp.); DesignAid (Nastec Corp.); Design Generator (Computer Sciences Corp.); EasyFlow (Haven-Tree Software Ltd.); Excelerator (Index Technology Corp.); Prodoc Translator (Scandura Intelligent Systems); ProKit Workbench (McDonnell Douglas Information Systems Co.); Teamwork/PCSA (Cadre Technologies Inc.); Visible Analyst Workbench (Visible Systems Corp.).

"Six CASE products for the Macintosh," H. Modell, Jun 89, 111-131: ANATOOL 3.0 (Advanced Logical Software); Silver Run-LDM, -ERM, and -DFD (Peat Marwick Advanced Technology); Deft 3.1 (Deft Inc.); MacBubbles 1.0 (StarSys Inc.); PowerTools SD 1.3 (Iconix Software Engineering Inc.).

### Compiler Construction Tools

"Compiler compilers: YACCs migrate to MS-DOS," T. Parker, Mar 89, 117-122: LALR 3.0 (LALR Research); PCYACC (Abraxas Software Inc.); MKS LEX & YACC (Mortice Kern Systems Inc.).

### Debuggers

"Programming's SWAT team: Three hardware-aided debuggers," J.M. Dlugosz, Jun 89, 105-109: Atron 386 Probe, SYS 108 (Atron); Periscope III (The Periscope Co. Inc.); TRAPPER (Purart Inc.).

### Disassemblers

"Disassemblers for MS-DOS," J. Kronman, Apr 89, 107-114: MD86 2.10 (C.C. Software); SNOOP2 2.01 (Spite Software); Dis-Doc 2.3, Soft-X-plore 3.1 (R.J. Swantek & Associates); DISnDATa 3.0 (Pro/Am Software Inc.); Sourcer 1.82. BIOS preprocessor (V Communications); Quaid Analyzer (Quaid Software Ltd.).

### DOS extenders

"Four products to extend MS-DOS," S. Ladd, Nov 89, 105-110: Developer's Kit 2.2B (Phar Lap Software Inc.); OS/386 2.0, OS/286 2.0 (Eclipse Computer Solutions Inc.); DOS/16M 3.64 (Rational Systems Inc.).

### Forth

"Stacking up the Forth alternatives," M. Davidson, Jul 89, 121-128: UR/FORTH 1.0 (Laboratory Microsystems Inc.); PolyFORTH ISD-4 21 (Forth Inc.); HS/FORTH 4.0 (Harvard Softworks).

### Interface Tools

"Tools for building interfaces," T. Parker, J. Powell, May 89, 105-126: VCScreen 2.13 (Creative Programming); Stagehand 2.1 (Datacode Inc.); JYACC Application Manager 4.0 (JYACC Inc.); Csource Software Development System 1.0 (Microcomputer Business Application Consultants); Look & Feel 1.0 (Oakland Group Inc.); PANEL Plus II 1.0 (Roundhill Computer Systems Ltd.); SoftCode 1.02 (Software Bottling Co.); turboMAGIC (Sophisticated Software Inc.); Screenstar 1.15 (South Mountain Software Inc.); Pro-C 1.3 (Vestonix); Power Screen 1.03 (Blaise Computing Inc.); Turbo Screen Master 1.0 (Blue Ridge Software); Rapid Application Development system 1.0 (Genesis Data Systems Inc.); PC/Forms 1.4 (Golden Solutions); Makeform 1.0 (Greenleaf Software Inc.); Data & Windows 2.1 (Magus Inc.); Turbo Plus 5.5 (Nostradamus Inc.); Radix Screen Management System 1.0 (Radix Systems Inc.); HI-SCREEN XL 4.05 (Softway Inc.); The Screen Generator 4.7 (The West Chester Group); FAST 2.0 (Aspen Scientific); Vitamin C 3.1A (Creative Programming); graphics-MENU 1.5 (Island Systems Inc.); Screen Manager Professional 1.06 (Logical Alternatives Inc.); C Windows Toolkit 2.0 (Magna Carta Software); MetaWindows/Plus 3.4B (Metagraphics Software Corp.); C-scape Interface Management System (Oakland Group Inc.); C-Worthy Interface Library 1.0 (Solution Systems Inc.); C-erious Toolkit Plus 1.0 (TSR System Ltd.).

### *Make* utilities

"Making it with DOS *makes*," D. Burnette, Jul 89, 127-132: Make++ 1.71 (Antares Software); Automake 1.5 (Gateway Systems Inc.); Slick Make 1.02 (MicroEdge Inc.); MKS Make 2.4 (Mortice Kern Systems Inc.); Opus Make 5.13 (Opus Software); PolyMake 1.0 (Polytron Corp.); QMake 1.2 (Quilt Computing); SMK 2.2, SMKgen 2.2 (Seidl Computer Engineering); VersiMake 3.0 (Summit Information Systems Inc.); Makeup 1.01 (Nathan Syfrig Enterprises Inc.).

### Math Packages

"Scientific software guide," T.A. Elkins, Oct 89, 91-99: Point Five (Pacific Crest Software Inc.); Eureka (Borland International); Curve (Curve Systems International); MathCAD (Mathsoft Inc.); TKSolver Plus, MiniTK (Universal Technical Systems Inc.); Solveit (Structured Scientific Software Inc.); Derive (Soft Warehouse Inc.); MicroStat II (Ecosoft Inc.); Statgraphics (STSC Inc.); Stata (Computing Resource Center); StatPac Gold (Walonick Associates); EcStatic (SomeWare in Vermont Inc.).

"Mathematical libraries for C," C. Murcko, Oct 89, 101-105: Quinn-Curtis Science and En-

gineering Tools 6.1 (Quinn-Curtis); Precision Plus Mathpak 87 3.0 (Precision Plus Software); Eigenware C Scientific Library 2.11 (Eigenware Technologies); QTC Math Advantage 3.1 (Quantitative Technology Corp.); Business MathLib S9-1.00 (Greenleaf Software Inc.).

**Modula-2**

"Modula-2 compilers: New kids on the block mature," S.R. Ladd, Mar 89, 99-110: FST Modula-2 2.0a (Fitted Software Tools); FTL Modula-2 1.12 (Workman & Associates); Modula-2 3.03 (Logitech Inc.); M2SDS-XP 2.2 (Interface Technologies Corp.); TaylorModula-2 2.1 (Taylor Software A.G.); Modula-2 1.2, QuickMod 1.0 (Stony Brook Software Inc.); TopSpeed Modula-2 1.14 (Jensen & Partners International Inc.).

**Object-oriented programming**

"Object-oriented Pascals: The next generation," K. Fleener, Aug 89, 91-100: Quick Pascal 1.0 (Microsoft Corp.); Turbo Pascal 5.5, Turbo Pascal Professional 5.5 (Borland International).

"Object-oriented programming for C," J. Dlugosz, Aug 89, 103-116: C_talk (CNS Inc.); Complete C (Complete Computer Corp.); C+O (Objective Systems).

**Profilers**

"DOS Profilers," J. Dlugosz, Oct 89, 81-87: The Profiler 2.04 (dwb Associates Inc.); Personal Measure 1.00 (Spirit of Performance Inc.); Inside! 2.0 (Paradigm Systems Inc.); High Resolution Timer PCHRT 2.0r (Ryle Design).

**Soft drinks**

"Caffeinated soft drinks: The state of the art," T. Bahr, Apr 89, 123-125: Diet Coke, Mountain Dew, Pepsi, New Coke, Classic Coke, Dr. Pepper, Jolt.

**Visual programming tools**

"Pretty as a picture programming," M. Caudill, Sep 89, 95-105: Double Helix II (Odesta Corp.); LabVIEW 1.2 (National Instruments Inc.); VIP 2.51 (Mainstay Inc.); Matrix Layout 1.2 (Matrix Software Technology Corp.); MicroStep 1.1 (SYSCORP International).

## Single-product reviews

Clarion v. 2 (Clarion Software), B. Andersen, Jan 89, 118-125.

DESQview v. 2.2, API ToolKit (Quarterdeck Office Systems), T. Parker, Apr 89, 115-118.

Genesis (National Design Inc.), J.M. Dlugosz, Sep 89, 113-117.

Lightspeed Pascal v. 2.2 (Symantec Corp.), D. Taylor, Jun 89, 133-136.

Logic Gem v. 1.0 (Sterling Castle), J.M. Dlugosz, May 89, 131-132.

Macintosh QuickBASIC v. 1.0 (Microsoft Corp.), L. Eliot, May 89, 134-136.

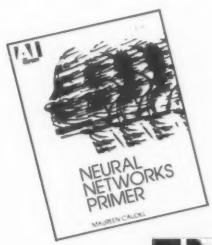
MPW v. 3.0 (Apple Programmer's and Developer's Assoc.), R. B. Andrews, Sep 89, 117-120.

PC-Lint (Gimpel Software), D. Burnette, Feb 89, 134-138.

Software through Pictures (Interactive Development Environments Inc.), W. Keuffel, Jul 89, 135-138.

Solvelt (Structured Scientific Software), J. Rex, Feb 89, 130-134.

ZVIEW v. 2.0 (Data Management Consultants), E. Dowgiallo, Feb 89, 138-146.

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